



IFW

PATENT  
Customer No. 22,852  
Attorney Docket No. 8940.0019-00000

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of: )  
)  
Hongbing ZHANG et al. ) Group Art Unit:1636  
)  
Application No.: 10/516,605 ) Examiner: Not yet assigned  
)  
Int'l Filing Date: October 31, 2003 ) Confirmation No.: 7194  
)  
National Stage of International Application )  
No. PCT/US2003/034811 under 35 U.S.C. )  
§ 371, for: STEM CELL LIBRARIES )

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. § 1.97(b)**

Pursuant to 37 C.F.R. §§ 1.56 and 1.97(b), Applicants bring to the Office's attention the documents listed on attached Form PTO/SB/08. This Information Disclosure Statement is being filed before the mailing date of a first Office Action on the merits for the above-referenced application. Copies of the listed documents, other than U.S. patents, are attached. Applicants respectfully request that the Examiner consider the documents listed on attached Form PTO/SB/08 and indicate that they were considered by making an appropriate notation on this form.

This submission does not represent that a search has been made or that no better art exists and does not constitute an admission that each or all of the listed documents are material or constitute "prior art." If the Examiner applies any of the documents as prior art against any claim in the application and Applicants determine

that the cited documents do not constitute "prior art" under United States law, Applicants reserve the right to present to the Office the relevant facts and law regarding the appropriate status of such documents. Applicants further reserve the right to take appropriate action to establish the patentability of the disclosed invention over the listed documents, should one or more of the documents be applied against the claims of the present application.

If there is any fee due in connection with the filing of this Statement, please charge the fee to our Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,  
GARRETT & DUNNER, L.L.P.

Dated: December 15, 2005

By: 

Lisa M. Matovcik

Reg. No. 53,283

Phone: (202) 408-4000

Fax: (202) 408-4400

E-mail: lee.matovcik@finnegan.com

## Complete if Known

INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet

1

of

2

Application Number	10/516,605
International Filing Date	October 31, 2003
First Named Inventor	Hongbing ZHANG
Art Unit	1636
Examiner Name	Not assigned
Attorney Docket Number	8940.0019-00000

## U.S. PATENTS AND PUBLISHED U.S. PATENT APPLICATIONS

Examiner Initials	Cite No.	Document Number	Issue or Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code (if known)			
	1	US-4,431,739	02-14-1984	A.D. Riggs	entire document
	2	US-4,425,437	01-10-1984	A.D. Riggs	entire document
	3	US-4,338,397	07-06-1982	W. Gilbert	entire document
	4	US-6,461,864	10-08-2002	P. Soriano	entire document
	5	US-6,242,666	06-05-2001	N. Sarvetnick	entire document
	6	US-09/823,356	09-27-2001	Y.T. Tang	SEQ. ID. NO.: 29
	7	US-6,555,654	04-29-2003	J.A. Todd	SEQ. ID. NO.: 9

Note: Copies of the U.S. Patent Documents are not Required in IDS filed after October 21, 2004

## FOREIGN PATENT DOCUMENTS

Examiner Initials	Cite No.	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	Translation
		Country Code Number Kind Code (if known)				
	8	WO 2004/042023 A3	05-21-2004	H. Zhang	entire document, including International Search Report	
	9	WO 2004/020595 A2	03-11-2004	L.T. Williams	entire document, including International Search Report and Sequence Listing, provided on CD	
	10	WO 2005/005597 A2	01-20-2005	L.T. Williams	entire document	
	11	WO 2004/020591 A2	03-11-2004	L.T. Williams	entire document, including International Search Report and Sequence Listing, provided on CD	
	12	WO 2004/035732 A2	04-29-2004	L.T. Williams	entire document, including International Search Report and Sequence Listing, provided on CD	
	13	WO 99/53017	10-21-1999	P. Soriano	entire document	

## NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	Translation
	14	AHMED, T., et al., Gene transfer of alpha interferon into hematopoietic stem cells, 1998, Leukemia Research, 2:119-124.	
	15	ANDERSON, D., Stem cells and transcription factors in the development of the mammalian neural crest, 1994, FASEB J., 8:707-713.	
	16	BAIN, G., et al., Embryonic stem cells express neuronal properties <i>in vitro</i> , 1995, Dev. Biol., 168(2):342-357.	
	17	BRANDON, C., et al., WNT signaling modulates the diversification of hematopoietic cells, 2000, Blood, 96:4132-4141.	
	18	BROWN, S.D., et al., Isolation and characterization of LRP6, a novel member of the low density lipoprotein receptor gene family, 2998, Biochem. Biophys. Res. Commun., 248(3):879-88.	

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet

2

of

2

Application Number

10/516,605

International Filing Date

October 31, 2003

First Named Inventor

Hongbing ZHANG

Art Unit

1636

Examiner Name

Not assigned

Attorney Docket Number

8940.0019-00000

## NON PATENT LITERATURE DOCUMENTS

19	CHAMBERS, I., et al., Functional expression cloning of nanog, a pluripotency sustaining factor in embryonic stem cells, 2003, Cell, 113:643-655.
20	DECKEL, A.W., et al., Altered neuronal nitric oxide synthase expression contributes to disease progression in Huntington's disease transgenic mice, 2002, Brain Research, 939:76-86.
21	EL OAKLEY, R.M., et al., Whole bone marrow transplantation induces angiogenesis following acute ischemia, 2002, Redox Report, 4:215-218.
22	FARINAS, I., et al., Regulation of neurogenesis by neurotrophins in developing spinal sensory ganglia, 2002, Brain Res. Bull., 57(6):809-816.
23	FRALEY, R., et al., New generation liposomes: the engineering of an efficient vehicle for intracellular delivery of nucleic acids, Trends in Biochemical Sciences, 1981, 6:77-80.
24	GASSMANN, M., et al., Maintenance of an extrachromosomal plasmid vector in mouse embryonic stem cells, 1995, Proc. Natl. Acad. Sci., 92:1292-1296.
25	HOSOYA, K., et al., Spleen lymphocyte kinetics in mice under normal and inflammatory conditions: An application of the transgenic mouse expressing $\beta$ -Galactosidase (ROSA 26), 2002, Biol. Pharm. Bull. 25(10):1378-1380.
26	KENNEDY, D., et al., Kinetics of central nervous system microglial and macrophage engraftment: Analysis using a transgenic bone marrow transplantation model, 1997, Blood, 3:986-993.
27	KENNEDY, D., et al., Mature monocytic cells enter tissues and engraft, 1998, Proc. Natl. Acad. Sci., 95:14944-14949.
28	KLUG, M., et al., Genetically selected cardiomyocytes from differentiating embryonic stem cells form stable intracardiac grafts, 1996, J. Clin. Invest., 98(1):216-224.
29	KOHLHEPP, R.L., et al., ROSA26 mice carry a modifier of <i>Min</i> -induced mammary and intestinal tumor development, 2000, Mammalian Genome, 11:1058-1062.
30	LAKO, M., et al., Characterisation of <i>Wnt</i> gene expression during the differentiation of murine embryonic stem cells in vitro: role of <i>Wnt3</i> in enhancing haematopoietic differentiation, 2001, Mechan. of Devel., 103:49-59.
31	MORRISON, S.J., et al., Regulatory mechanisms in stem cell biology, 1997, Cell, 88(3):287-298.
32	PERCIVAL, A.C., et al., Analysis of pancreatic development using a cell lineage label, 1999, Exp. Cell Res., 247:123-132.
33	PORCHER, C., et al., The T cell leukemia oncoprotein SCL/tal-1 is essential for development of all hematopoietic lineages, 1996, Cell, 86(1):47-57.
34	PRELLE K., et al., Overexpression of insulin-like growth factor-II in mouse embryonic stem cells promotes myogenic differentiation, 2000, Biochem. Biophys. Res. Commun., 277(3):631-638.
35	REMY, J.S., et al., Targeted gene transfer into hepatoma cells with lipopolyamine-condensed DNA particles presenting galactose ligands: A stage toward artificial viruses, 1995, Proc. Natl. Acad. Sci., 92:1744-1748.
36	SATO, K., et al., Cloned transgenic mouse fetuses from embryonic stem cells, 2001, Human Cell, 14:301-304.
37	TAUB, R., Transcriptional control of liver regeneration, 1996, FASEB J., 10:413-427.
38	WEBER, M., et al., Formation of cartilage matrix proteins by BMP-transfected murine mesenchymal stem cells encapsulated in a novel class of alginates, 2002, Biomaterials, 23:2003-2013.
39	WEINBERG, J.M., et al., Biologic therapy for psoriasis: the tumor necrosis factor inhibitors infliximab and etanercept, 2003, Cutis, 71(1):25-29.
40	WILES, M.V., Embryonic stem cell differentiation <i>in vitro</i> , 1993, Methods Enzymol., 255:900-919.
41	WILES, M.V., et al., Multiple hematopoietic lineages develop from embryonic stem (ES) cells in culture, 1991, Devel., 111(2):259-267.
42	ZAMBROWICZ, B.P., et al., Disruption of overlapping transcripts in the ROSA $\beta$ geo 26 gene trap strain leads to widespread expression of $\beta$ -galactosidase in mouse embryos and hematopoietic cells, 1997, Proc. Natl. Acad. Sci., 94:3789-3794.

Examiner  
SignatureDate  
Considered

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.